

What is claimed is:

1. A constant velocity universal joint comprising:
a cylindrical outer member connected to a transmission
5 shaft, said outer member having guide grooves separated from
each other by a predetermined spacing distance and extending
in an axial direction on an inner circumferential surface of
said outer member; and

10 an inner member connected to another transmission shaft,
said inner member being inserted into an opening in said'
outer member, said inner member including trunnions each
having a spherical surface and annular members each having a
spherical recess adapted to receive said spherical surface,

15 wherein a cutout surface is formed on a part of said
spherical surface of said trunnion, to which no torque is
applied.

20 2. A constant velocity universal joint according to
claim 1, wherein said cutout surface comprises a flat
surface.

25 3. A constant velocity universal joint according to
claim 2, wherein said cutout surface comprises a pair of
opposite flat surfaces.

4. A constant velocity universal joint according to
claim 1, wherein said cutout surface comprises a recess or a

bore.

5. A constant velocity universal joint according to
claim 4, wherein said cutout surface comprises a pair of
opposite bores.

10. A constant velocity universal joint according to
claim 1, wherein said cutout surface comprises a flat
surface separating said spherical surface formed in a
circumferential direction of said trunnion.

15. A constant velocity universal joint according to
claim 6, wherein said cutout surface comprises a pair of
opposite flat surfaces.

20. A constant velocity universal joint according to
claim 1, wherein said cutout surface comprises a curved
surface formed in a circumferential direction of trunnion.

25. A constant velocity universal joint according to
claim 8, wherein said cutout surface comprises a pair of
opposite curved surfaces.

10. A constant velocity universal joint according to
claim 9, wherein width of said curved surface is decreased
gradually from a substantially central portion toward both
ends of said curved surface in said circumferential

direction.

11. A constant velocity universal joint comprising:
a cylindrical outer member connected to a transmission
5 shaft, said outer member having guide grooves separated from
each other by a predetermined spacing distance and extending
in an axial direction on an inner circumferential surface of
said outer member; and

an inner member connected to another transmission shaft,
said inner member being inserted into an opening in said
outer member, said inner member including trunnions each
having a spherical surface and annular members each having a
spherical recess adapted to receive said spherical surface,
wherein a pair of cutout surfaces each comprising at
15 least a flat surface, a curved surface, or a composite
surface of a flat surface and a curved surface are formed on
opposite parts of said spherical surface of said trunnion,
to which no torque is applied, and
wherein said spherical recess is formed in a perfectly
20 circular opening of said annual member.

12. A constant velocity universal joint comprising:
a cylindrical outer member connected to a transmission
shaft, said outer member having guide grooves separated from
25 each other by a predetermined spacing distance and extending
in an axial direction on an inner circumferential surface of
said outer member; and

an inner member connected to another transmission shaft,
said inner member being inserted into an opening in said
outer member, said inner member including trunnions each
having a spherical surface and annular members each having a
5 spherical recess adapted to receive said spherical surface,

wherein a substantially disk-shaped head is formed by
cutting out a part of said spherical surface of said
trunnion ,

10 wherein a pair of cutout surfaces each comprising at
least a flat surface, a curved surface, or a composite
surface of a flat surface and a curved surface are formed on
opposite parts of a band-shaped circumferential surface of
said disk-shaped head of said spherical surface of said
trunnion, to which no torque is applied, and

15 wherein said spherical recess is formed in a perfectly
circular opening of said annual member.

and as